

2007_08_13_SequenceListing_542758016US01.txt
SEQUENCE LISTING

<110> ZENGEN, INC.
Lipton, James M.

<120> MODIFIED ALPHA-MSH PEPTIDES AND DERIVATIVES THEREOF

<130> 54275.8016.US01

<140> 10/714,343
<141> 2003-11-14

<150> US 60/426,929
<151> 2002-11-14

<160> 46

<170> PatentIn version 3.3

<210> 1
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Phe or DPhe

<400> 1

His Phe Arg Trp Gly Lys Xaa Val
1 5

<210> 2
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DPhe or DNle

<400> 2

His Xaa Arg Trp Gly Lys Pro Val
1 5

<210> 3
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DPhe or DNle

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Phe or DPhe

<400> 3

His Xaa Arg Trp Gly Lys Xaa Val
1 5

<210> 4
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is an amino acid having a non-polar functional group

<400> 4

His Phe Arg Trp Gly Lys Xaa Val
1 5

<210> 5
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa is an amino acid other than Val having a non-polar functional group or a hydrophobic functional group

<400> 5

His Phe Arg Trp Gly Lys Pro Xaa
1 5

<210> 6

<211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (6)..(6)
 <223> Xaa is an amino acid having a non-polar functional group

<400> 6

His Phe Arg Trp Gly Xaa Pro Val
 1 5

<210> 7
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is an amino acid having a positively charged functional group

<400> 7

His Phe Arg Trp Gly Lys Xaa Val
 1 5

<210> 8
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is an amino acid having a negatively charged functional group

<400> 8

His Phe Arg Trp Gly Lys Xaa Val
 1 5

<210> 9
 <211> 8
 <212> PRT
 <213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DPhe or DNle

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is an amino acid having a negatively charged functional group

<400> 9

His Xaa Arg Trp Gly Lys Xaa Val
1 5

<210> 10
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is DTrp

<400> 10

His Phe Arg Xaa Gly Lys Pro Val
1 5

<210> 11
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is an amino acid having an uncharged polar functional group

<400> 11

His Phe Arg Trp Gly Lys Xaa Val
1 5

<210> 12
<211> 8

```

<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DPhe or DNle

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is an amino acid having an uncharged polar functional group

<400> 12
His Xaa Arg Trp Gly Lys Xaa Val
1                               5

<210> 13
<211> 13
<212> PRT
<213> Homo sapiens

<400> 13
Ser Tyr Ser Met Glu His Phe Arg Trp Gly Lys Pro Val
1                               5                               10

<210> 14
<211> 39
<212> PRT
<213> Homo sapiens

<400> 14
Ser Tyr Ser Met Glu His Phe Arg Trp Gly Lys Pro Val Gly Lys Lys
1                               5                               10                               15

Arg Arg Pro Val Lys Val Tyr Pro Asn Gly Ala Glu Asp Glu Ser Ala
20                               25                               30

Glu Ala Phe Pro Leu Glu Phe
35

<210> 15
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Truncated MSH peptide

<400> 15

```

Met Glu His Phe Arg Trp Gly
1 5

<210> 16
<211> 3
<212> PRT
<213> Artificial

<220>
<223> Truncated MSH peptide

<400> 16

Lys Pro Val
1

<210> 17
<211> 4
<212> PRT
<213> Artificial

<220>
<223> Truncated MSH peptide

<400> 17

His Phe Arg Trp
1

<210> 18
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa is Dval

<400> 18

His Phe Arg Trp Gly Lys Pro Xaa
1 5

<210> 19
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<400> 19

His Phe Arg Trp Gly Ala Pro Val

1

5

<210> 20
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<400> 20

His Phe Arg Trp Gly Lys Ala Val
 1 5

<210> 21
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<400> 21

His Phe Arg Trp Gly Lys Pro Ala
 1 5

<210> 22
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DPhe

<400> 22

His Xaa Arg Trp Gly Lys Pro Val
 1 5

<210> 23
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)

<223> Xaa is DNle

<400> 23

His Xaa Arg Trp Gly Lys Pro Val
1 5

<210> 24

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa is DTrp

<400> 24

His Phe Arg Xaa Gly Lys Pro Val
1 5

<210> 25

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<400> 25

His Phe Arg Trp Gly Lys Pro Leu
1 5

<210> 26

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa is DA1a

<400> 26

His Phe Arg Trp Gly Lys Xaa Val
1 5

<210> 27

<211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is Dnle

<400> 27

His Xaa Arg Trp Gly Lys Ala Val
 1 5

<210> 28
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DNle

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is DAla

<400> 28

His Xaa Arg Trp Gly Lys Xaa Val
 1 5

<210> 29
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<400> 29

His Phe Arg Trp Gly Lys Gly Val
 1 5

<210> 30
 <211> 8
 <212> PRT
 <213> Artificial

<220>

<223> Modified MSH peptide

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> Xaa is DNle

<400> 30

His Xaa Arg Trp Gly Lys Gly Val
1 5

<210> 31

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<400> 31

His Phe Arg Trp Gly Lys Ser Val
1 5

<210> 32

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> Xaa is DNle

<400> 32

His Xaa Arg Trp Gly Lys Ser Val
1 5

<210> 33

<211> 8

<212> PRT

<213> Artificial

<220>

<223> Modified MSH peptide

<400> 33

His Phe Arg Trp Gly Lys Phe Val
1 5

<210> 34
 <211> 8
 <212> PRT
 <213> Artificial

 <220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is DPhe

<400> 34

His Phe Arg Trp Gly Lys Xaa Val
 1 5

<210> 35
 <211> 8
 <212> PRT
 <213> Artificial

 <220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DPhe

<400> 35

His Xaa Arg Trp Gly Lys Phe Val
 1 5

<210> 36
 <211> 8
 <212> PRT
 <213> Artificial

 <220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DPhe

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is DPhe

<400> 36

His Xaa Arg Trp Gly Lys Xaa Val
 1 5

```

<210> 37
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DNle

<400> 37
His Xaa Arg Trp Gly Lys Phe Val
1 5

```

```

<210> 38
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is DNle

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is DPhe

<400> 38
His Xaa Arg Trp Gly Lys Xaa Val
1 5

```

```

<210> 39
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Modified MSH peptide

<400> 39
His Phe Arg Trp Gly Lys Asp Val
1 5

```

```

<210> 40
<211> 8

```

<212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is DAsp

<400> 40

His Phe Arg Trp Gly Lys Xaa Val
 1 5

<210> 41
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DPhe

<400> 41

His Xaa Arg Trp Gly Lys Asp Val
 1 5

<210> 42
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DNle

<400> 42

His Xaa Arg Trp Gly Lys Asp Val
 1 5

<210> 43
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide
 <400> 43
 His Phe Arg Trp Gly Lys Glu Val
 1 5

<210> 44
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DNle

<400> 44
 His Xaa Arg Trp Gly Lys Glu Val
 1 5

<210> 45
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<400> 45
 His Phe Arg Trp Gly Lys Lys Val
 1 5

<210> 46
 <211> 8
 <212> PRT
 <213> Artificial

<220>
 <223> Modified MSH peptide

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa is DNle

<400> 46
 His Xaa Arg Trp Gly Lys Lys Val
 1 5